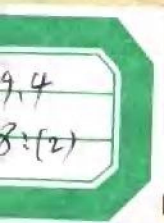
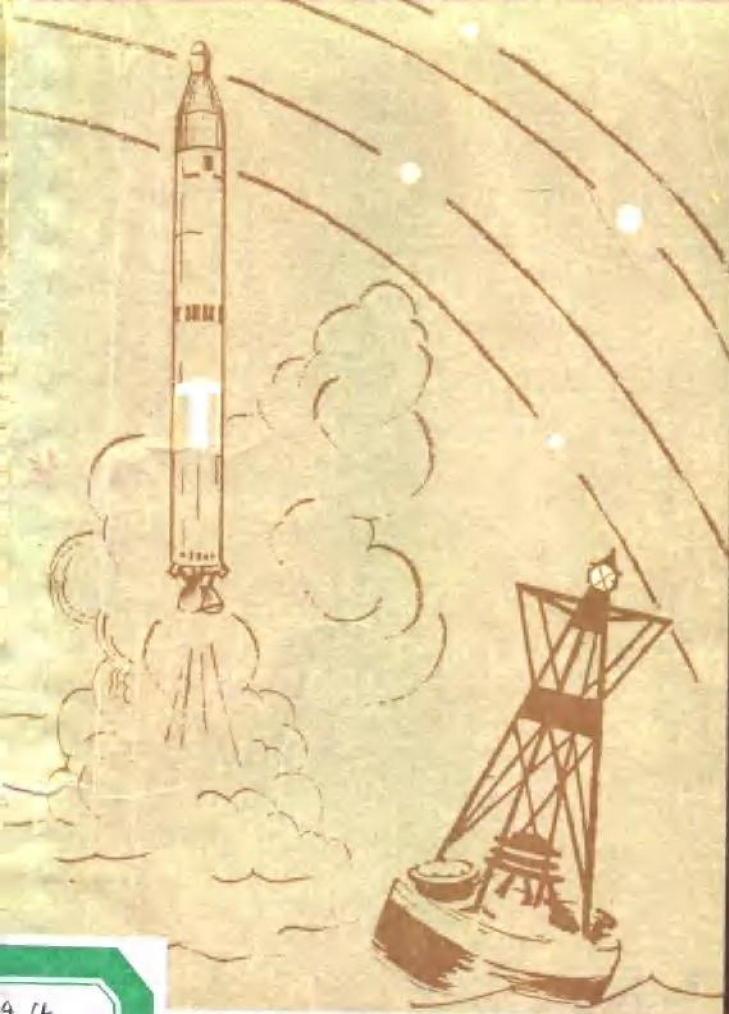


英语科普阅读文选



SCIENCE READINGS

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2

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编 选 说 明

为了适应广大读者学习英语的需要,并为高等学校理工科一、二年级学生提供一些课外阅读材料,我们选编了这套《英语科普阅读文选》。

本书文章全部选自新近出版的英、美书刊。所选文章力求内容新颖有趣,文字生动活泼,题材、体裁多种多样。为了帮助读者阅读和理解,每篇文章后面列出生词表,并对文中的习惯用法、较难的句子结构和语法现象,作了必要的注释。全书共分三册,第二册的生词和注释以复旦大学主编的高等学校理科《英语》教材第三册为基础。生词的注音根据丹尼尔·琼斯的《英语正音词典》(第十三版);英、美拼法不同的单词不求统一,依据文章来源而定。

本书由复旦大学丰华瞻、王沂清、周惠麟,华东师范大学徐小鲁,中山大学顾敏渊,上海科学技术大学沈子文、毛雪华和上海师范学院胡瑞璋选编。由于我们水平有限,缺点和错误在所难免,热忱希望读者批评指正。

本书承复旦大学葛传槩教授审阅,特此表示感谢。

编 者

1980年10月

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1. Hints for Reading Practice

*Set aside time each day.*¹

Most of us can find 15 minutes or half an hour each day for some specific regular activity. It may be a free period or a regular wait, say in the queue for a bus or meal — even while eating breakfast.² One famous surgeon always made it a rule to³ spend at least 15 minutes on general reading before he went to sleep each night. Whether he went to bed at 10 p. m.⁴ or 2.30 a.m.⁵ made no difference. Even if you cannot keep to⁶ this kind of discipline, it is a good idea to make sure you always have a general interest book in your pocket.⁷ Don't forget it should be a book which entertains you and the English must not be too difficult for you.

Dictionaries slow you down.

If you have chosen the right, fairly easy, sort of book for your general reading practice, you will not need to use a dictionary for such an exercise. If you really must know the dictionary meaning of all the words you meet (a doubtful necessity),

jot them down⁸ on a piece of paper to look up⁹ later. Actually, the meanings of many words will be clear from the sentences around them — what we call the “context”.

Pay attention to¹⁰ paragraph structure.

Most paragraphs have a “topic sentence”, which expresses the central idea.¹¹ The remaining sentences expand or support that idea. It has been estimated that between 60% and 90 % of all expository paragraphs in English have the topic sentence first. Always pay special attention to the first sentence of a paragraph; it is most likely to give you the main idea.

Sometimes, though, the first sentence in the paragraph does not have the feel of a “main idea” sentence. It does not seem to give us enough new information to justify a paragraph. The next most likely place to look for the topic sentence is the last sentence of the paragraph.

Take this paragraph for example.¹²

“Some students prefer a strict teacher who tells them exactly what to do. Others prefer to be left to work on their own. Still others like a democratic discussion type of class. No one teach-

ing method can be devised to satisfy all students at the same time.”

Remember that the opening and closing paragraphs of a passage or chapter are particularly important. The opening paragraph suggests the general direction and content of the piece, while the closing paragraph often summarizes the very essence of what has been said.¹³

Faster effective reading.

Perhaps you would like to know¹⁴ what reading speeds are common among native English-speaking university students¹⁵ and how these speeds can be improved. Tests in Minnesota, U.S.A., for example, have shown that students without special training can read English of average difficulty, for example, Tolstoy's *War and Peace* in translation,¹⁶ at speeds of between 240 and 250 w. p. m.¹⁷ with about 70 % comprehension. Minnesota claims that after 12 half-hour lessons, once a week, the reading speed can be increased, with no less of comprehension, to around 500 w. p. m. It is further claimed that with intensive training over seventeen weeks, speeds of over 1000 w. p. m. can be reached, but this would be quite exceptional.

If you get to the point where you can read books of average difficulty at between 400 and 500 w. p. m. with 70 % or more comprehension, you will be doing quite well, though of course any further improvement of speed-with-comprehension will be a good thing.¹⁸

Glossary

hint /hint/ <i>n.</i>	提示;暗示
queue /kju:/ <i>n.</i>	行列,长队
meal /mi:l/ <i>n.</i>	一餐,一顿(饭)
breakfast /'brekfəst/ <i>n.</i>	早餐
surgeon /'sə:dʒən/ <i>n.</i>	外科医生
discipline /'disiplin/ <i>n.</i>	纪律;训练
pocket /'pɒkit/ <i>n.</i>	衣袋
context /'kɒntekst/ <i>n.</i>	(文章的)上下文
structure /'strʌktʃə/ <i>n.</i>	结构;构造
express /iks'pres/ <i>vt.</i>	表达;表示
expository /eks'pɒzɪtəri/ <i>a.</i>	讲解的;阐述的
justify /'dʒʌstɪfaɪ/ <i>vt.</i>	证明……是正当的
prefer /pri'fə:/ <i>vt.</i>	宁可;更喜欢
strict /strikt/ <i>a.</i>	严格的;严谨的
democratic /,demə'krætɪk/ <i>a.</i>	民主的
devise /di'vaɪz/ <i>vt.</i>	设计
passage /'pæsɪdʒ/ <i>n.</i>	(文章、讲话、乐曲等的)一段,一节

chapter /'tʃæptə/ <i>n.</i>	(书的)章
summarize /'sʌməraɪz/ <i>vt.</i>	概括; 总结
essence /'esns/ <i>n.</i>	本质; 精华, 要素
average /'ævərɪdʒ/ <i>a.</i>	普通的; 平均的
comprehension /,kɒmpri'henʃən/ <i>n.</i>	理解, 理解力
claim /kleɪm/ <i>vt.</i>	自称, 声称
intensive /ɪn'tensɪv/ <i>a.</i>	集中的
exceptional /ɪk'sepʃənl/ <i>a.</i>	例外的; 罕见的

Explanatory Notes

1. Set aside time each day.
每天安排一定的时间。
set aside 意为“留出”。
2. It may be a free period or a regular wait, say in the queue for a bus or meal — even while eating breakfast.
这也许是一段空闲的时间或是通常用来等候的时间, 比如说在排队等公共汽车或等吃饭时——甚至在吃早餐的时候。
say 作“比如说”解。
3. make it a rule to (接不定式): 规定(做某事); 养成习惯(做某事)
4. p. m.: 下午, 午后
p. m. 是拉丁语 post meridiem (=afternoon) 的缩写。
5. a. m.: 上午, 午前
a. m. 是拉丁语 ante meridiem (= before noon) 的缩写。

6. keep to: 坚持;遵守

7. ..., it is a good idea to make sure you always have a general interest book in your pocket.

……, 保证你口袋里总是带一本有趣的普通读物, 那是个好主意。

make sure 意为“弄确实;保证”。

8. jot ... down: 草草记下……

9. look up: (在词典、参考书中)查寻

10. pay attention to: 注意

11. Most paragraphs have a “topic sentence”, which expresses the central idea.

大多数段落都有一个“说明段落主题的句子”, 来表达它的中心思想。

12. take ... for example: 以……为例

13. The opening paragraph suggests the general direction and content of the piece, while the closing paragraph often summarizes the very essence of what has been said.

起首的一段往往提出文章的总的方向和要点, 而收尾的一段常常是把所述内容的精华加以概括。

这里的 very 是形容词, 与 the, this 或 my, your 等连用, 以加强语气。

14. Perhaps you would like to know ...

或许你想知道一下……

“would like + 不定式”用来表示个人的看法、想法, 使语气婉转些。又如:

Would you like to see a film this evening ?

今天晚上你想看电影吗？

15. native English-speaking university students: 本族语是英语的大学生

16. Tolstoy's *War and Peace* in translation: 托尔斯泰的《战争与和平》翻译本

托尔斯泰，全名是列夫·尼古拉耶维奇·托尔斯泰(1828—1910)，俄国作家，著有《战争与和平》、《安娜·卡列尼娜》、《复活》等。他的作品对欧洲文学有很大影响。

17. w. p. m.: 每分钟字数

w. p. m. 是 words per minute 的缩写。

18. If you get to the point where you can read books of average difficulty at between 400 and 500 w. p. m. with 70 % or more comprehension, you will be doing quite well, though of course any further improvement of speed-with-comprehension will be a good thing.

假使你能阅读中等难度的书籍，每分钟达到400至500个单词，理解70%或更多一点，那就很不错了。当然，进一步提高在理解基础上的阅读速度将是一件好事。

1) get to the point 意为“达到……程度”。

2) where you can read books ... more comprehension 是由关系副词 where 引导的定语从句，修饰 point。

2. Of What Is the Soil Made ?

The thin layer of soil that covers most of the surface of the earth nourishes all of the life that exists on land. Without it, no grass or grain or vegetables could grow to furnish food for animals and men.

Soil is a combination of decaying rock and decaying vegetable matter. The hot summer sun heats bare rock and expands and cracks it. The ice and snow of winter contracts and splits it. Rain washes tiny grains of the weathered rock into small depressions of the ground. Here the rock particles mingle with¹ dead leaves and decaying plants — and the two form the carpet of soil that covers the earth's floor.

You can prove this by dropping a handful of² soil from a garden into a glass of water. Stir it up, and then allow it to settle. Some particles will float to the top. The rest will sink to the bottom. If you examine the floating particles, you will see that they are small bits and pieces of leaves and roots and other vegetable matter. The particles that sink are bits of sand and gravel, remnants of

the weathered and broken-up rock.

During most of the earth's lifetime, it had no soil. There was nothing on the face of the land but barren rock. Then tiny plants from the sea water, called lichens, began to grow on rocks at the ocean's edge. Their little roots penetrate the rock's surface and caused bits of it to scale off. Then, as the lichens died and decayed, they mingled with the rock dust and gradually began to turn into soil.

More plants grew, and they in turn³ became part of the soil. And in this way the carpet of soil began creeping inland from the seashores until it had covered most of the earth's land.

The soil is divided into three layers.

The bottom layer is solid bedrock, with its upper edges slowly decomposing, or decaying, and flaking off.⁴

The middle layer is hard-packed, and contains rock fragments and pebbles mixed with clay and heavy earth. Minerals seep down into it from the surface, and up from the ground-water that lies underneath. Only the roots of trees and larger plants penetrate this middle layer.

The top layer is the part of the soil in which we plant things. It is soft and crumbly, and is composed sometimes almost entirely of decayed vegetable matter. This layer extends down for only a few inches.

And yet,⁵ in this thin layer of topsoil, an amazing amount of plant and animal life is present.

Glossary

nourish /'nʌrɪʃ/ <i>vt.</i>	养育; 施肥于
grain /greɪn/ <i>n.</i>	谷物
furnish /'fɜːnɪʃ/ <i>vt.</i>	供应; 提供
combination /ˌkɒmbɪ'neɪʃən/ <i>n.</i>	结合, 结合体
decay /di'keɪ/ <i>vi.</i>	腐朽, 腐烂
contract /kən'trækt/ <i>vt.</i>	使缩小; 使收缩
weather /'weðə/ <i>vt.</i>	侵蚀、使风化
depression /di'preʃən/ <i>n.</i>	凹地, 洼地
minge /'mɪŋɡl/ <i>vi.</i>	相混合
carpet /'kɑːpɪt/ <i>n.</i>	地毯; 似地毯一样的覆盖物
stir /stəː/ <i>vt.</i>	摇动; 搅拌
settle /'setl/ <i>vt.</i>	使沉降
gravel /'grævəl/ <i>n.</i>	砂砾
lifetime /'laɪf'taɪm/ <i>n.</i>	生存期
lichen /'laɪkən/ <i>n.</i>	地衣
scale /skeɪl/ <i>vi.</i>	剥落, 脱落

creep /kri:p/ <i>vi.</i>	蔓延
crept /krept/	
crept	
seashore /'si:'ʃɔ:/ <i>n.</i>	海岸
fragment /'frægmənt/ <i>n.</i>	碎片, 碎块
pebble /'pebl/ <i>n.</i>	卵石
clay /klei/ <i>n.</i>	粘土
seep /si:p/ <i>vi.</i>	渗出
crumbly /'krʌmbli/ <i>a.</i>	易弄碎的

Explanatory Notes

1. mingle with: 与……相混合
2. a handful of: 一把
3. in turn: 依次, 轮流
4. The bottom layer is solid bedrock, with its upper edges slowly decomposing, or decaying, and flaking off.

底层是坚硬的基岩, 它最上面的边缘在慢慢地分解、腐蚀和剥落。

with its upper edges ... flaking off 是介词短语, 作状语, 说明附带情况。在这个介词短语中, edges 是介词 with 的宾语, 现在分词 decomposing, decaying, 和分词短语 flaking off 是宾语补足语。

5. and yet: 然而